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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,295	11/14/2003	Hieyoung W. Oh	14104	2127

7590 04/05/2006

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EXAMINER	
PATEL, DHARTI HARIDAS	

ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,295	OH ET AL.	
	Examiner	Art Unit	
	Dharti H. Patel	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-7,11,14,15,20,21 and 23* is/are allowed.

6)☒ Claim(s) *1-3, 8-10, 12-13, 16-19, 22, 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Tooker et al., Patent No. 6,498,913. With respect to claim 1, Tooker teaches an apparatus having dissipated static electric charge on a moving component thereof [Abstract, lines 1-3, Fig. 2, 150], said apparatus comprising a moving component [Fig. 2, 10] upon which static electrical charges build during operation of said apparatus [Col. 7, line 23]; a static charge neutralizing assembly [Fig. 3, 152] associated with said moving component, said neutralizing assembly including a conductive carrier strip [Fig. 3, 166, 169]; and a plurality of electrically conductive filaments [Fig. 3, 170, 172] attached to said carrier strip, said filaments having diameters sufficiently small to induce ionization in the presence of an electric field generated by static charges on said moving component, said filaments disposed on said carrier strip and extending beyond an edge of said carrier strip and having distal ends remote from said carrier strip; and said

apparatus disposed in a position with respect to said moving component to hold said filaments with said distal tips adjacent but in spaced relation to said moving component so as to not contact said moving component during operation thereof, to thereby cause ionization between said filaments and said moving component as disclosed in Fig. 2, Fig. 3, and Col. 7, lines 28-38.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 2-3, 8-10, 12-13, 16-19, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tooker et al., in view of Fox et al., Patent No., 5,010,441. Tooker teaches an apparatus having dissipated static electric charge on a moving component, the moving component being a photoreceptor belt, but does not disclose that the moving component is a roll. With respect to claim 2, Fox teaches an apparatus having dissipated static electric charge on a moving component, wherein the moving component is a roll [Fig. 2, 75].

Both teachings are related by being static controlling systems for effectively and economically controlling static charge build upon a moving component. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fox, which teaches a moving component being a roll, with the static charge controlling system of

Tooker for the benefit of electrically grounding roll/shaft to dissipate static electric charge.

With respect to claim 3, Fox teaches that the distal tips [Fig. 3, 108] are disposed in spaced relation to an outer surface of said roll [Fig. 2, 75].

With respect to claim 8, Tooker teaches that the moving component is slats of a conveyor [Fig. 2, 10, Col. 1, lines 7-8].

With respect to claims 9 and 10, Fox teaches that the moving component [Fig. 2, 75] is a motor shaft [Fig. 2, Col. 6, lines 14-16].

With respect to claim 12, Fox teaches a carrier strip [Fig. 3, 104, 110, 115] that is annular in shape and surrounding said shaft [Fig. 2, 75], and said filaments [Fig. 2, 108] extending inwardly beyond an inner edge of said annular carrier strip as disclosed in Fig. 2 and Fig. 3.

With respect to claims 13 and 16, Fox teaches that the filaments [Fig. 3, 108] are arranged in bundles [Fig. 3, Col. 6, lines 23-25].

With respect to claim 17, Fox teaches an electric motor [Fig. 2, 112] comprising a motor shaft [Fig. 2, 75] rotated during operation of the motor and accumulating static charges thereon during said operation; a static charge neutralizing assembly [Fig. 2, 73] associated with said shaft, said neutralizing assembly including a conductive carrier strip [Fig. 2, 104, 110, 114]; a plurality of electrically conductive filaments [Fig. 2, 108] electrically connected to said conductive carrier strip, said filaments being sufficiently small to induce ionization in the presence of an electrical field from static charges on said shaft, said

filaments projecting beyond an edge of said carrier strip as disclosed in Col. 6, lines 12-22, lines 28-29, Fig. 2 and Fig. 3. However, Fox does not disclose that the distal tips are disposed adjacent but in spaced relation to said shaft so as to not contact said shaft during operation thereof.

Tooker teaches an apparatus having dissipated static electric charge on a moving component. Tooker teaches filaments [Fig. 3, 170] projecting beyond an edge of said carrier strip [Fig. 3, 166, 168] and having distal tips disposed adjacent but in spaced relation to said moving component so as to not contact the moving component during operation thereof [Col. 7, lines 28-38].

Both teachings are related by being static controlling systems for effectively and economically controlling static charge build upon a moving component. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Tooker, which teaches distal tips that are in spaced relation to a moving component, with the static charge neutralizing assembly of Fox for the benefit of creating an electric field that causes air breakdown or ionization to occur, resulting in an electric current that flows to and through the brush fibers to ground from the moving component.

With respect to claim 18, Fox teaches that the carrier strip [Fig. 3, 104, 110, 114] is annular shaped and surrounds the shaft [Fig. 2, 75].

With respect to claims 19 and 22, Fox teaches that the filaments [Fig. 2, 108] are arranged in bundles projecting inwardly from said annular shaped carrier strip.

With respect to claim 24, Fox teaches a method for neutralizing static charge on a moving component [Fig. 2, motor shaft 75] of an apparatus, said method comprising steps of: providing an arrangement of filaments [Fig. 2, 108] having diameters sufficiently small to induce ionization in the presence of an electrical field created by static charges on the component, but does not disclose that the distal ends of the filaments are positioned near but spaced from a surface of the component, operating the apparatus including moving the surface of the component past the distal tips of the filaments adjacent thereto, such that distal tips of the filaments do not contact the component during operation thereof.

Tooker teaches an apparatus having dissipated static electric charge on a moving component. Tooker teaches that the distal ends of the filaments [Fig. 3, 174] are positioned near but spaced from a surface of the component; operating the apparatus including moving the surface of the component past the distal tips of the filaments adjacent thereto, such that distal tips of the filaments do not contact the component during operation thereof; and inducing ionization from the static electric charge on the surface of the component along the filament distal tips [Col. 7, lines 28-38].

Allowable Subject Matter

3. Claims 4-7, 11, 14-15, 20-21 and 23 are allowed. The following is an examiner's statement of reasons for indicating allowance of claim 4: Fox et al. teach a moving component being a roll but does not disclose a roll having a shaft extending therethrough, and said apparatus having a mounting fixture attached

to said shaft. This is not anticipated or rendered obvious by the prior art of record.

The following is an examiner's statement of reasons for indicating allowance of claim 11: Fox et al. teach a carrier strip including first 110 and second 114 outer layers on opposite sides, but does not disclose each outer layer having a shoulder adjacent said carrier strip and having a portion thereof projecting beyond said edge of said carrier strip adjacent but spaced from said distal tips of said filaments. This is not anticipated or rendered obvious by the prior art of record.

The following is an examiner's statement of reasons for indicating allowance of claim 14: Fox et al. teaches a carrier strip including first 110 and second 114 outer layers on opposite sides, but does not disclose each outer layer having a shoulder adjacent said carrier strip and having a portion thereof projecting inwardly adjacent but spaced from said distal tips of said filaments. This is not anticipated or rendered obvious by the prior art of record.

The following is an examiner's statement of reasons for indicating allowance of claim 20 and 23: Fox et al. teaches a carrier strip including first 110 and second 114 outer layers on opposite sides, but does not disclose each outer layer having a shoulder adjacent said carrier strip and having a portion thereof projecting inwardly beyond said edge of said carrier strip adjacent but spaced from said distal tips of said filaments. This is not anticipated or rendered obvious by the prior art of record.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dharti H. Patel whose telephone number is 571-272-8659. The examiner can normally be reached on 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800, Ext. 36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DHP
03/29/2006

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